

Claims

- [c1] 1. An apparatus for measuring optoelectric properties of an organic light-emitting device (OLED), comprising:
a platform;
a goniometer disposed on one side of the platform,
wherein an OLED is attached to the goniometer;
a three-axis moving device disposed on another side of the platform;
a photo-detector disposed on the three-axis moving device, wherein the photo-detector is oriented in a direction toward the OLED on the goniometer; and
a computer linked to the goniometer, the three-axis moving device and the photo-detector.
- [c2] 2. The apparatus of claim 1, wherein the goniometer is capable of rotating and/or tilting.
- [c3] 3. The apparatus of claim 1, wherein the three-axis moving device has mechanisms for moving forward and backward (in the X direction), up and down (in the Y direction) and left and right (in the Z direction).
- [c4] 4. The apparatus of claim 1, wherein the computer controls the movement of the three-axis moving device, the

rotation and/or tilting of the goniometer and the recording of measured data obtained from the photo-detector.

- [c5] 5. The apparatus of claim 1, wherein the photo-detector further comprises a brightness-measuring device for measuring the brightness level, coloration, viewing angle and uniformity of the OLED.
- [c6] 6. The apparatus of claim 1, wherein the apparatus further comprises an integrated sphere disposed on the three-axis moving device for providing the surrounding with a uniform brightness level so that the contrast ratio of the OLED can be measured.
- [c7] 7. The apparatus of claim 1, wherein the apparatus further comprises a power supply controlled by the computer for driving the OLED.
- [c8] 8. The apparatus of claim 7, wherein the apparatus further comprises a current driver connected to the power supply and controlled by the computer for measuring the response time of an OLED under predetermined conditions.
- [c9] 9. An apparatus for measuring optoelectric properties of an organic light-emitting device (OLED), comprising:
 - a platform;
 - a goniometer disposed on one side of the platform,

wherein an OLED is attached to the goniometer;
a three-axis moving device disposed on another side of the platform;
a brightness detector disposed on the three-axis moving device, wherein the brightness detector is oriented in a direction toward the OLED on the goniometer; and
a computer linked to the goniometer, the three-axis moving device and the brightness detector.

[c10] 10. The apparatus of claim 9, wherein the goniometer is capable of rotating and/or tilting.

[c11] 11. The apparatus of claim 9, wherein the three-axis moving device has mechanisms for moving forward and backward (in the X direction), up and down (in the Y direction) and left and right (in the Z direction).

[c12] 12. The apparatus of claim 9, wherein the computer controls the movement of the three-axis moving device, the rotation and/or tilting of the goniometer and the recording of measured data obtained from the brightness detector.

[c13] 13. The apparatus of claim 9, wherein the apparatus further comprises an integrated sphere disposed on the three-axis moving device for providing the surrounding with a uniform brightness level so that the contrast ratio

of the OLED can be measured.

[c14] 14. The apparatus of claim 9, wherein the apparatus further comprises a power supply controlled by the computer for driving the OLED.

[c15] 15. The apparatus of claim 14, wherein the apparatus further comprises a current driver connected to the power supply and controlled by the computer for measuring the response time of an OLED under predetermined conditions.

[c16] 16. A method of measuring the optoelectric properties of an organic light-emitting device (OLED) using an apparatus described in claim 1, comprising the steps of:
programming the computer to drive the OLED via the power supply and remotely control the photo-detector ;
programming the computer to drive the three-axis moving device to a specified location, and rotate and/or tilt the OLED on the goniometer to a specified angle;
measuring the optoelectric properties of the OLED using the photo-detector; and
recording the data measured by the photo-detector into the computer automatically.

[c17] 17. The method of claim 16, wherein the computer further carries out a data processing, graph plotting and

statistical analysis on the data measured by the photo-detector.

- [c18] 18. The method of claim 16, wherein the optoelectric properties of the OLED comprises the brightness, the coloration, the viewing angle, the uniformity, the contrast ratio and the response time of the OLED.